

**O & M INSPECTION REPORT  
FOR NAVIGATION AND SHORE PROTECTION PROJECTS**

1. Project Name: Aunu'u SBH
2. Date of Inspection: April 7, 2004
3. Inspection Personnel:

	<u>Name</u>	<u>Agency/Office</u>	<u>Telephone No.</u>
a.	Jessica Hays	COE	438-1680
b.	Selila Patane	Ports Admin.- HarborMaster	684-633-4449
c.	So'oto Vitale	Ports Admin.- Maint. Supv.	684-633-4449

4. Discussion:

**South Revetted Mole:**

Station	Reach	Comments
0+00 to 0+74	#1	Root
0+75 to 2+20	#2	Trunk
2+21 to 2+27	#2	Trunk/Transition

**Stub Breakwater:**

Station	Reach	Comments
2+28 to 3+10	#3	Head

**Wave Absorber:**

Station	Comments
0+00 to 2+00	0+00 at Tie Back 0+50 at Boat Ramp Corner 2+00 at North Rev Mole

**North Revetted Mole:**

Station	Reach	Comments
0+00 to 0+49	#1	Root
0+50 to 0+99	#2	Trunk Trans 10' - 12' Elev
1+00 to 2+79	#3	Trunk
2+80 to 3+00	#4	Head

Note: All photos were taken in 2004 unless stated otherwise as "(2003 PHOTO)." High tides inhibited some visibility in this inspection, so several photos from previous years were reused.

The major deficiencies were as follows:

South Revetted Mole & Stub Breakwater:



a. Sta. 0+00, HS, Notice encroachments - Fale and sign. POH is coordinating with its Real Estate office to address the issue of encroachments on Aunu'u Harbor. Juvenile trees from previous year have been removed.



b. Sta. 1+00, OS, Monitor lea. Dislodged armor stone at the toe.



c. Sta. 1+19, HS, Cracked armor stone. (2003 Photo)



d. Overview of harborside of revetted mole.





e. Sta. 1+80, OS, Missing armor toe stones.



f. Sta. 2+45, OS Sideslope, Monitor slight depression. (2003 Photo)



g. Sta. 2+85, OS, Monitor sideslope depression and cracked armor stone at hinge.



h. Sta. 2+90, OS, Monitor 1 ea. Dislocated armor stone at the toe.  
(2003 Photo)





i. Overview of Oceanside slope of stub breakwater.



j. View of South Revetted Mole and Stub Breakwater.

**Wave Absorber:**



a. Sta. 1+20, Portions of the wave absorber have been dismantled. The armor stones loosely dumped into the area, and are not keyed or fitted.



b. Sta. 1+50, sideslope armor stone missing, underlayer exposed.





c. Sta 1+75, Large amounts of debris and smaller armor stone thrown landward of wave absorber, indicative of structure overtopping.



d. Sta. 1+99, Monitor changes @ 10' diameter x 5' deep void, and 4'x4' void on the sideslope, UL exposed. Armor stones dislodged and resting adjacent to toe. Minor changes since 2003.



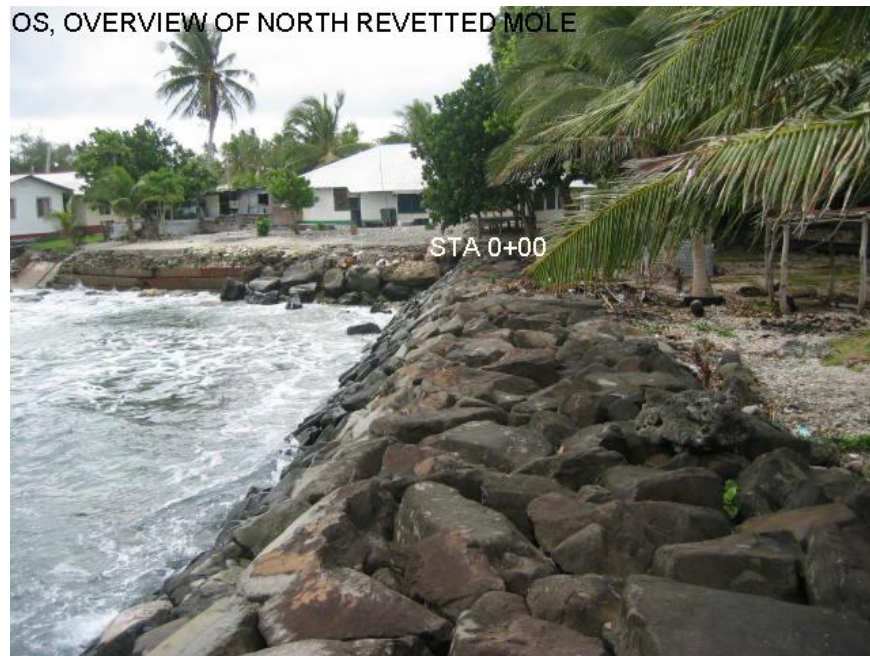


e. Sta 0+00 to 1+75, Overview of wave absorber side slope.



f. Harbor surge and overtopping at joint between wave absorber and North Revetted Mole.

**North Revetted Mole:**



- a. Sta. 0+00, OS, Vines and trees have been removed from structure.  
(2003 Photo)



- b. Sta. 1+00, Intersection of Wave Absorber, and North Revetted Mole,  
HS. (2003 Photo)





c. Sta. 2+25, OS, Monitor void and dislodged toe armor stone (2002 PHOTO).



d. Sta. 2+75, HS, Chipped tribar #184.





e. Overview of HS slope of North Revetted Mole, primarily good condition.



f. Several cracked armor stones along HS crest of revetted mole (no station available), monitor.



g. Sta 2+80, Several small armor stones thrown landward of structure onto mole area, indicative of structure overtopping. No noticeable voids in structure.



h. View of head North Revetted Mole.

5. Findings/Conclusions:

The South Revetted Mole (220LF) + Stub Breakwater (90LF) are evaluated as one structure. These structure function primarily as 1 breakwater and for rehabilitation purposes, as they are connected, any impact to one structure will affect all. This structure is in GOOD condition. The major item of concern noted during this inspection was the wave surge damage being caused to the wave absorber at its joint with the North Revetted Mole. This surge problem will continue to affect the integrity of the structures and the useability of the harbor unless the harbor layout is changed or additional structures are added. The overall condition of the project is FAIR.

Signed: \_\_\_\_\_  
Jessica Hays, CEPOH-EC-T

Signed: \_\_\_\_\_  
Jim Pennaz P.E., Ch, CEPOH-EC-T

Attached:  
Project Index Map





## AUNUU SMALL BOAT HARBOR, AMERICAN SAMOA

### CONDITION OF IMPROVEMENT 30 SEPTEMBER 1993

PREVIOUS PROJECTS: None.

EXISTING PROJECT: Authorized for construction on 7 June 1976 under Section 107 of the River and Harbor Act of 1960, as amended. Provides for an entrance channel 175 feet long, 70 feet wide and 14 feet deep; a turning area of 7,500 square feet and 14 feet deep; northern revetted mole 300 feet long; wave absorber 200 feet long; stub breakwater 90 feet long; southern revetted mole 220 feet long; a mooring area 13,500 square feet and 8 feet deep; and appurtenant aids to navigation.

### PROGRESS OF WORK

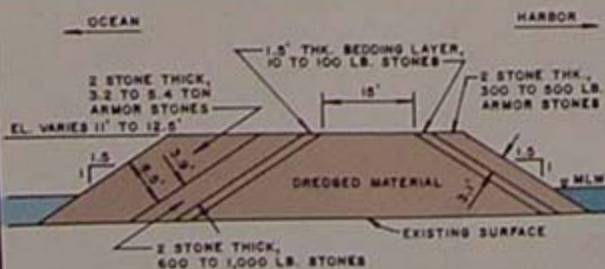
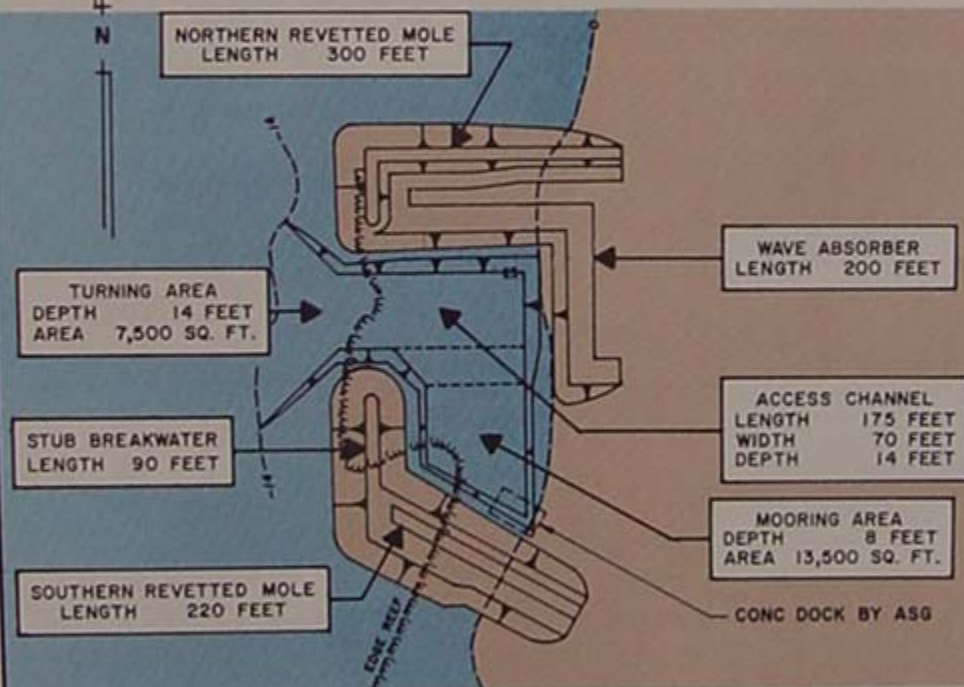
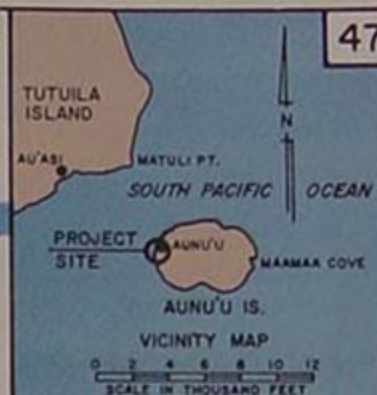
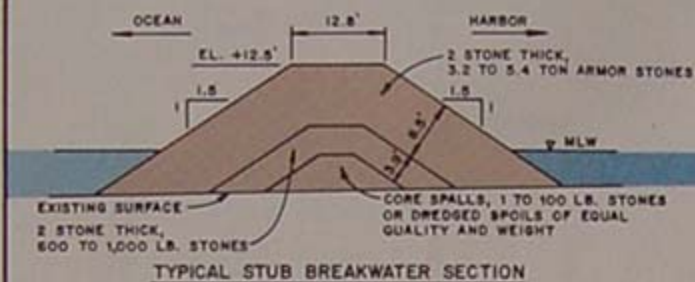
Completed and Under Maintenance: The project was completed in March 1981. Repair work to damaged revetted mole and wave absorber sections was completed in January 1985. A contract to repair damaged revetted mole and wave absorbers noted during an annual inspection of the harbor in September 1986 was completed in February 1989 for \$111,000.

Work Remaining: A single contract to repair damages to public facilities caused by Hurricane Ofa in February 1990 at Aunuu Harbor and to repair damages to breakwaters caused by Hurricane Val in December 1991 at Aunuu and Auasi Small Boat Harbor was awarded in August 1992 for \$415,000 of which \$395,000 was for Aunuu Harbor. Auasi Small Boat Harbor repair work was completed in February 1993 and Aunuu Harbor is scheduled for completion in June 1994.

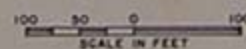
### COST OF CONSTRUCTION:

	<u>New Work</u>	<u>Maintenance</u>	<u>Total</u>
<u>Completed Works:</u>			
United States Funds			
Corps of Engineers	\$1,703,000	\$221,598	\$1,924,598
Coast Guard	10,446	0	10,446
Contributed Funds			
Required	<u>224,848</u>	<u>0</u>	<u>224,848</u>
Total Costs	\$1,938,294	\$221,598	\$2,159,892
<u>Uncompleted Works:</u>			
United States Funds		<u>\$667,500</u>	<u>\$667,500</u>
Total Estimated Costs		\$667,500	\$667,500

RANGE OF TIDES: The range of tide between mean low water and mean high water is 2.5 feet.



AUNU'U SMALL BOAT HARBOR  
AUNU'U ISLAND, AMERICAN SAMOA  
REVISED 30 SEPTEMBER 1981



U. S. ARMY  
ENGINEER DIVISION, PACIFIC OCEAN  
CORPS OF ENGINEERS